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SUBJECT: **ARCHITECTURAL TECHNICAL GUIDE 0021 (January 1, 2005)**
Asbestos Investigation, Mitigation, and Certification: Requirements for Single
Family Housing and Multi-Family Housing Existing Construction

PURPOSE:

The purpose of this Architectural Technical Guide (ATG) is to disseminate information regarding current requirements for the investigation, abatement, and post abatement certification of asbestos found in construction components in existing single family residences and multi-family housing projects. Asbestos problems in Rural Development financed properties are presently viewed by the real estate industry as a likely time bomb for future litigation. This ATG is intended to provide educational information on the subject as well as suggested policy. It contains the following major headings:

- Recommended Implementation Responsibilities,
- General Information about Asbestos Problems in Residential Buildings,
- Asbestos Inspection and Remediation Services
- Available Colorado Service Providers
- Cost Data for Asbestos Investigation and Abatement Services
- Additional Resources

Recommended Implementation Responsibilities

Asbestos was used heavily in the past in many construction industries (i.e. military, firefighting, appliances, building materials, etc.) because of its great effectiveness in providing fire resistance at very high temperatures. Unfortunately, an associated negative aspect was learned in later years when asbestos workers began developing lung diseases as a result of exposure to microscopic asbestos fibers. Much Federal legislation has been enacted subsequently to regulate the presence of asbestos in industry, schools, and other public buildings as well as in appliances and asbestos abatement practices. Federal agencies directly involved with the regulation of asbestos include the U.S. Environmental Protection Agency (EPA), the U.S. Occupational Safety and Health Administration (OSHA), the U.S. Food and Drug Administration (FDA), the U.S. Mine Safety and Health Administration (MSHA), and the U.S. Consumer Product Safety Commission (CPSC).



Asbestos fibers (unmagnified)

A lengthy discussion of the history of asbestos is provided in Exhibit A to this ATG for general information dissemination.

Though no official Rural Development policy has been developed by the National Office of the Rural Housing Service to date, some prudent, common sense guidelines are recommended for those who will encounter this recognized problem.

Asbestos is recognized as an immediate health hazard when it is in a “friable” condition where it is crumbly and easily released into the atmosphere. Friable asbestos is potentially dangerous in the development of lung diseases because of its extremely microscopic size and related properties. It has been noted that it would take a three feet long strand of asbestos approximately eight hours to drop to the floor.

Non-friable asbestos presents less of a short-term problem depending on the type of building component concerned and its location but may present a long-term problem requiring removal or management. Non-friable asbestos, for example, could become a friable hazard if present in a wearing surface, such as floor tiles, whereby fibers could be released into a confined interior space. Non-friable asbestos, on the other hand, might not be a concern if present as an exterior non-wearing surface, such as asbestos siding tiles, whereby fibers could only easily be released by a hard impact and, in any event, would not be released within a confined interior space. In both examples, the key considerations for identifying the non-friable asbestos presence as hazardous or non-hazardous are (1) the ease at which it could become friable and (2) its existing location either in a confined space (where inhaling would present a great risk) or not in a confined space (where inhaling would present only a slight risk). Frequently worn surfaces could easily become friable whereas infrequently visited spaces (i.e. attics and crawlspaces) would pose only occasional hazard from disturbances.

Whenever friable asbestos or non-friable asbestos that could easily become friable (see the discussion above) are discovered during building rehabilitation construction efforts or are discovered in REO properties the following categories of professional services should be contracted for the property. Phased contracting of the categories is recommended for those instances where full remediation may not be intended in the decision tree due to the relationship of the appraised value of the property versus the cost of full abatement and restoration, or for other pertinent reasons (i.e. the otherwise unsuitability of the property for program reasons). All required services should be contracted with firms with established full credentials as discussed in more detail elsewhere in this ATG. The major categories of services include:

1. A comprehensive asbestos inspection service to identify existing friable and non-friable asbestos components and locations
2. A cost estimate service for full abatement and post abatement certification services
3. A cost estimate service for full restoration services (reconstruction of the property following asbestos abatement)
4. A full asbestos abatement service
5. A post abatement certification service
6. A recommendation for the owner's management of asbestos components intended to remain (due to their non-friable condition or infrequently accessed location)
7. A full restoration service

Obtaining the post abatement certification is particularly critical as this document would provide the agency with a legal recourse to future asbestos related litigation regarding the property in question. It would be prudent to require that the post abatement clearance certification be accomplished by an independent firm to avoid a potential conflict of interest.

Notification of the status of asbestos investigation, remediation, and post abatement certification work accomplished should be provided to prospective property owners as a due diligence responsibility.

General Information about Asbestos Problems in Residential Buildings

Asbestos is a mineral fiber. It can be positively identified only with a special type of microscope. There are several types of asbestos fibers. In the past, asbestos was added to a variety of products to strengthen them and to provide heat insulation and fire resistance.

Most products made today do not contain asbestos. Those few products made which still contain asbestos that could be inhaled are required to be labeled as such. Until the 1970s, many types of building products and insulation materials used in homes contained asbestos. Common products used in residential construction that might have contained asbestos in the past, and conditions which might release fibers, include:

- STEAM PIPES, BOILERS, and FURNACE DUCTS insulated with an asbestos blanket or asbestos paper tape. These materials may release asbestos fibers if damaged, repaired, or removed improperly.
- RESILIENT FLOOR TILES (vinyl asbestos, asphalt, and rubber), the backing on VINYL SHEET FLOORING, and ADHESIVES used for installing floor tile. Sanding tiles can release fibers. So may scraping or sanding the backing of sheet flooring during removal.
- CEMENT SHEET, MILLBOARD, and PAPER used as insulation around furnaces and woodburning stoves. Repairing or removing appliances may release asbestos fibers. So may cutting, tearing, sanding, drilling, or sawing insulation.
- DOOR GASKETS in furnaces, wood stoves, and coal stoves. Worn seals can release asbestos fibers during use.
- SOUNDPROOFING OR DECORATIVE MATERIAL sprayed on walls and ceilings. Loose, crumbly, or water-damaged material may release fibers. So will sanding, drilling, or scraping the material.

- PATCHING AND JOINT COMPOUNDS for walls and ceilings, and TEXTURED PAINTS. Sanding, scraping, or drilling these surfaces may release asbestos.
- ASBESTOS CEMENT ROOFING, SHINGLES, and SIDING. These products are not likely to release asbestos fibers unless sawed, dilled, or cut.
- ARTIFICIAL ASHES AND EMBERS sold for use in gas-fired fireplaces.
- Some ROOFING AND SIDING SHINGLES are made of asbestos cement.
- Houses built between 1930 and 1950 may have ASBESTOS AS INSULATION.
- Older products such as STOVE-TOP PADS may have some asbestos compounds.
- WALLS AND FLOORS AROUND WOODBURNING STOVES may be protected with asbestos paper, millboard, or cement sheets.

One cannot tell whether a material contains asbestos simply by looking at it, unless it has been labeled. If in doubt, one should treat the material as if it contains asbestos or have it sampled and analyzed by a qualified professional. Only a professional should take samples for analysis since only a professional knows what precisely to look for and because there may be an increased health risk if fibers are released during sample taking. If done incorrectly, in fact, sampling can be more hazardous than leaving the material alone. Taking samples yourself is not recommended.

Asbestos Inspection and Remediation Services

A thorough physical inspection of a home or multifamily housing project to find evidence of mold problems involves a comprehensive analysis by a professional firm specializing in asbestos investigation and analysis. Typically such inspection services attempt to identify signs of asbestos by searching for likely asbestos containing materials.

Asbestos investigation and abatement follows procedures similar to those exercised for mold abatement since both environmental hazards primarily involve contaminants that are inhaling hazards. For this reason, many environmental remediation firms that perform mold investigations and abatements are also willing to address asbestos investigations and abatements. The full realm of asbestos investigation and abatement services covers the following categories:

- Building and land surveys to locate and identify the type, extent and condition of asbestos containing materials.
- Compilation of detailed Asbestos Survey Reports and Assessments with recommendations to further necessary action.
- Sampling and analysis of bulk materials for asbestos fiber type.
- Preparation of detailed specifications and scopes of work for asbestos removal projects followed by tender administration and client / contractor liaison.
- Asbestos Project Management during removal works, including full on-site contractor supervision, enclosure testing, leakage monitoring, and final visual inspections and clearance air testing.
- Provision of final reports with all relevant certification.

When contracting for the above services, all the usual rules apply regarding preparing statements of work for hazardous materials remediations:

- Clearly identify desired services
- Write in a short, concise manner
- Avoid telling the service provider how to accomplish the work aside from providing useful coordination information
- Identify performance expectations (i.e. accomplish all work necessary to achieve a post abatement clearance certification)
- State that the service provider will furnish adequate credentials and a resume
- State that the service provider will accomplish all work in strict accordance with applicable State and Federal regulations as well as industry standards
- Design tasks in phased stages in cases where appropriate (and, if this option is exercised, state that partial payment will be accomplished at the conclusion of each phase). Following are some potential phases:
 - Provide a thorough investigation
 - Provide a cost estimate for full abatement
 - Provide full abatement
 - Provide a post abatement clearance certification
- It would be prudent to require that the post abatement clearance certification be accomplished by an independent firm to avoid a potential conflict of interest.
- Require itemized cost breakdowns for all services, for verification. Following is an example of some typical categories of abatement services likely to be encountered:
 - Building component tear-out, cleaning, and bagging for removal
 - Furnace and ductwork cleaning
 - Appliance cleaning
 - Fixture cleaning
 - Vacuuming, sanding, and sealing
 - Negative air pressure fan operation
 - Personal protective equipment charges
 - Personal respirator charges
 - HEPA replacement filter charges
 - Equipment decontamination charges
 - Pre and post abatement sampling charges
 - Overhead (usually up to 10 percent)
 - Profit (usually up to 10 percent)

Asbestos containing materials are disposed of only at certain sites because asbestos is classified by the U.S. Environmental Protection Agency as a “special waste”. A comprehensive listing of Colorado certified asbestos disposal sites has been compiled by the Colorado Department of Public Health and Environment and is available for downloading as an *Adobe Acrobat* .pdf file at the following Internet site

<http://www.cdphe.state.co.us/ap/down/asbestosdisposalsites.pdf>

Available Colorado Service Providers

A comprehensive listing of Colorado accredited asbestos testing laboratories has been compiled by the Colorado Department of Public Health and Environment and is available for downloading as an *Adobe Acrobat* .pdf file at the following Internet site:

<http://www.cdphe.state.co.us/ap/down/asbeslabs.pdf>

A comprehensive listing of Colorado certified asbestos abatement contractors has been compiled by the Colorado Department of Public Health and Environment and is available for downloading as an *Adobe Acrobat* .pdf file at the following Internet site:

<http://www.cdphe.state.co.us/ap/down/asgenabatcontlist.pdf>

Cost Data for Asbestos Investigation and Abatement Services

Maintaining cost data for asbestos investigation and remediation components is critical for statewide dissemination. A copy of cost information associated with all contracts for asbestos hazard investigation and remediation should be forwarded to the State Environmental Coordinator. Detailed information is particularly crucial. Please forward by fax, email, or regular mail in this regard: (1) the scope-of-work of the service(s) and (2) the cost information (i.e. bids). There are no special formatting requirements for any of this information at this time. A simple photocopy of the information would be fine with any annotations you feel would be pertinent.

Additional Resources

The EPA Public Information Center can send information on EPA regulations. One can reach the center at 202.382.2080 or 202.475.7751.

General information on this subject is available at the following Internet sites:

U.S. Environmental Protection Agency:
<http://www.epa.gov/asbestos>

Colorado Department of Public Health and Environment:
<http://www.cdphe.state.co.us/ap/asbeshom.asp>

Should you have any questions, please feel free to contact the State Architect.

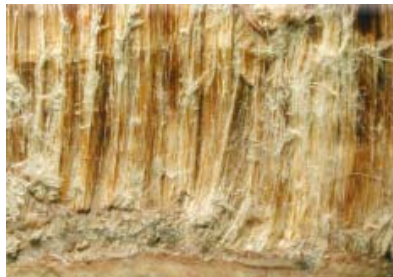
DAVID W. RIGIROZZI
State Architect
USDA/Rural Development

Attachment: Exhibit A, "*More on Asbestos....*"

More on Asbestos....

What is asbestos?

Asbestos is a mineral. It is mined in much the same way that other minerals, such as iron, lead, and copper, are. Asbestos is composed of silicon, oxygen, hydrogen, and various metal cations (positively charged metal ions). There are many varieties of asbestos: the three most common are chrysotile, amosite, and crocidolite. Chrysotile fibers are pliable and cylindrical, and often arranged in bundles. Amosite and crocidolite fibers are like tiny needles.



The first commercial asbestos mine -- a chrysotile mine -- opened in Quebec, Canada, in the 1870's. Crocidolite asbestos was first mined in South Africa during the 1980's. Amosite asbestos also comes from Africa and was first mined in 1916. Unlike most minerals, which turn into dust particles when crushed, asbestos breaks up into fine fibers that are too small to be seen by the human eye. Often individual fibers are mixed with a material that binds them together, producing asbestos containing material (ACM).

Why has asbestos been so widely used?

Asbestos appealed to manufacturers and builders for a variety of reasons. It is strong yet flexible, and it will not burn. It conducts electricity poorly, but insulates effectively. It also resists corrosion. Asbestos may have been so widely used because few other available substances combine the same qualities.

How many products contain asbestos?

One study estimated that 3,000 different types of commercial products contained asbestos. The amount of asbestos in each product varied from as little as one percent to as much as 100 percent. Many older plastics, paper products, brake linings, floor tiles and textile products contain asbestos, as do many heavy industrial products such as sealants, cement pipe, cement sheets, and insulation. The final Asbestos Ban and Phaseout Rule prohibits the manufacture, processing and importation of most asbestos products.

How long has asbestos been in use?

Asbestos was first used in the United States in the early 1900's, to insulate steam engines, but until the early 1940's, asbestos was not used extensively. World War II and for the next thirty years, people who constructed and renovated schools and other public buildings used asbestos and asbestos -containing materials (ACM) extensively. They used ACM primarily to fireproof, insulate, soundproof, and decorate. The Environmental Protection Agency (EPA) estimates that there are asbestos containing materials in most of the nation's approximately 107,000 primary and secondary schools and 733,000 public and commercial buildings.

How are people exposed to asbestos?

When asbestos fibers are in the air, people may inhale them. Because asbestos fibers are small and light, they can stay in the air for a long time. People whose work brings them into contact with asbestos—workers who renovate buildings with asbestos in them, for example— may inhale fibers that are in the air. This is called occupational exposure. Workers' families may inhale asbestos fibers released by clothes that have been in contact with ACM. This is called paraoccupational exposure. People who live or work near asbestos-related operations may inhale asbestos fibers that have been released into the air by the operations: this is called neighborhood exposure. The amount of asbestos a worker is exposed to will vary according to:

- The concentration of fibers in the air
- Duration of exposure
- The worker's breathing rate (workers doing manual labor breathe faster)
- Weather conditions
- The protective devices the worker wears

It is estimated that between 1940 and 1980, 27 million Americans had significant occupational exposure to asbestos. People may also ingest asbestos if they eat in areas where there are asbestos fibers in the air.

When is ACM most likely to release asbestos fibers?

Damaged ACM is more likely to release fibers than non-damaged ACM. In a 1984 survey, EPA found that approximately 66 percent of those buildings that contained asbestos contained damaged ACM. If ACM, when dry, can be crumbled by hand pressure -- a condition known as "friable" -- it is more likely to release fibers than if it is "non-friable." Fluffy, spray-applied asbestos fireproofing material is generally considered "friable." Some materials which are considered "non-friable," such as vinyl-asbestos floor tile, can also release fibers when sanded, sawed or otherwise aggressively disturbed. Materials such as asbestos cement pipe can release asbestos fibers if broken or crushed when buildings are demolished, renovated or repaired. ACM which is in a heavy traffic area, and which is therefore often disturbed, is more likely to release fibers than ACM in a relatively undisturbed area.

How can asbestos be identified?

While it is often possible to "suspect" that a material or product is/or contains asbestos by visual determination, actual determinations can only be made by instrumental analysis. Until a product is tested, it is best to assume that the product contains asbestos, unless the label, or the manufacturer verifies that it does not.

The EPA requires that the asbestos content of suspect materials be determined by collecting bulk samples and analyzing them by polarized light microscopy (PLM). The PLM technique

determines both the percent and type of asbestos in the bulk material. EPA Regional Offices can provide information about laboratories that test for asbestos.

Does asbestos exposure cause health problems?

Some people exposed to asbestos develop asbestos-related health problems while some do not. Once inhaled, asbestos fibers can easily penetrate body tissues. They may be deposited and retained in the airways and lung tissue. Because asbestos fibers remain in the body, each exposure increases the likelihood of developing an asbestos-related disease. Asbestos related diseases may not appear until years after exposure. Today we are witnessing the results of exposure among asbestos workers during World War II.

A medical examination which includes a medical history, breathing capacity test, and chest x-ray may detect problems early. Scientists have not been able to develop a "safe" or threshold level for exposure to airborne asbestos. Ingesting asbestos may be harmful, but the consequences of this type of exposure have not been clearly documented. Nor have the effects of skin exposure to asbestos been documented. People who touch asbestos may get a rash similar to the rash caused by fiberglass.

What illnesses are associated with asbestos exposure?

Asbestosis

Asbestosis is a serious, chronic, non-cancerous respiratory disease. Inhaled asbestos fibers aggravate lung tissues, which causes them to scar. Symptoms of asbestosis include shortness of breath and a dry crackling sound in the lungs while inhaling. In its advanced stages, the disease may cause cardiac failure.

There is no effective treatment for asbestosis; the disease is usually disabling or fatal. The risk of asbestosis is minimal for those who do not work with asbestos. The disease is rarely caused by neighborhood or family exposure. Those who renovate or demolish buildings that contain asbestos may be at significant risk, depending on the nature of the exposure and precautions taken.

Lung Cancer

Lung cancer causes the largest number of deaths related to asbestos exposure. The incidence of lung cancer in people who are directly involved in the mining, milling, manufacturing, and use of asbestos and its products is much higher than in the general population. The most common symptoms of lung cancer are coughing and a change in breathing. Other symptoms include shortness of breath, persistent chest pains, hoarseness, and anemia.

People who have been exposed to asbestos and are also exposed to some other carcinogen — such as cigarette smoke — have a significantly greater risk of developing lung cancer than people who have only been exposed to asbestos. One study found that asbestos workers who smoke are about 90 times more likely to develop lung cancer than people who neither smoke nor have been exposed to asbestos.

Mesothelioma

Mesothelioma is a rare form of cancer which most often occurs in the thin membrane lining of the lungs, chest, abdomen, and (rarely) heart. About 3000 cases are diagnosed each year in the United States. Virtually all cases of mesothelioma are linked with asbestos exposure.

Approximately 2 percent of all miners and textile workers who work with asbestos, and 10 percent of all workers who were involved in the manufacture of asbestos-containing gas masks, contract mesothelioma.

People who work in asbestos mines, asbestos mills and factories, and shipyards that use asbestos, as well as people who manufacture and install asbestos insulation, have an increased risk of mesothelioma. So do people who live with asbestos workers, near asbestos mining areas, near asbestos product factories or near shipyards where use of asbestos has produced large quantities of airborne asbestos fibers.

The younger people are when they inhale asbestos, the more likely they are to develop mesothelioma. This is why enormous efforts are being made to prevent school children from being exposed.

Other Cancers

Evidence suggests that cancers in the esophagus, larynx, oral cavity, stomach, colon and kidney may be caused by ingesting asbestos. For more information on asbestos-related cancers, contact your local chapter of the American Cancer Society.

More on mesothelioma.....

Malignant mesothelioma is a rare form of lung cancer. Mesothelioma is the term used to describe a cancerous tumor which involves the mesothelial cells of an organ, usually the lungs, heart, or abdominal organs. *Pleural mesothelioma* or cancer of the lung lining is the most common form of mesothelioma cancer. *Peritoneal mesothelioma* is stomach lining cancer and is the next most common form of mesothelioma.

The onset of mesothelioma asbestos lung cancer is usually very slow, and the most commonly noted mesothelioma symptoms are chest pain and pain in the lower back. Sometimes the pain is accompanied by difficulty breathing, coughing, weight loss and fever.

Who regulates asbestos?

The U.S. Environmental Protection Agency and the Occupational Safety and Health Administration (OSHA) are responsible for regulating environmental exposure and protecting workers from asbestos exposure. OSHA is responsible for the health and safety of workers who may be exposed to asbestos in the work place, or in connection with their jobs. EPA is responsible for developing and enforcing regulations necessary to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health.

The EPA's Worker Protection Rule (40 CFR Part 763, Subpart G) extends the OSHA standards to state and local employees who perform asbestos work and who are not covered by the OSHA Asbestos Standards, or by a state OSHA plan. The Rule parallels OSHA requirements and covers medical examinations, air monitoring and reporting, protective equipment, work practices, and record keeping. In addition, many State and local agencies have more stringent standards than those required by the Federal government. People who plan to renovate or remove asbestos from a building of a certain size, or who plan to demolish any building, are required to notify the appropriate federal, state and local agencies, and to follow all federal, state, and local requirements for removal and disposal of regulated asbestos-containing material (RACM).

EPA's advice on asbestos is neither to rip it all out in a panic nor to ignore the problem under a false presumption that asbestos is "risk free." EPA, rather, recommends a practical approach that

protects public health by emphasizing that asbestos material in buildings should be located, that it should be appropriately managed, and that those workers who may disturb it should be properly trained and protected. That has been, and continues to be, EPA's position. The following summarizes the five major facts that the Agency has presented in congressional testimony:

Fact One:

Although asbestos is hazardous, human risk of asbestos disease depends upon exposure.

Fact Two:

Prevailing asbestos levels in buildings -- the levels school children and the general population face as building occupants -- seem to be very low, based upon available data. Accordingly, the health risk the general population faces as building occupants also appears to be very low.

Fact Three:

Removal is often not a school district's or other building owner's best course of action to reduce asbestos exposure. An improper removal, in fact, can create a dangerous situation where none previously existed.

Fact Four:

EPA only requires asbestos removal in order to prevent significant public exposure to asbestos, such as during building renovation or demolition.

Fact Five:

EPA does recommend in-place management whenever asbestos is discovered. Instead of removal, a conscientious in-place management program will usually control fiber releases, particularly when the materials are not significantly damaged and are not likely to be disturbed.

What are EPA's laws and regulations governing asbestos?

TSCA

In 1979, under the Toxic Substances Control Act (TSCA), EPA began an asbestos technical assistance program for building owners, environmental groups, contractors and industry. In May 1982, EPA issued the first regulation intended to control asbestos in schools under the authority of TSCA. This regulation was known as the Asbestos-in-Schools Rule. Starting in 1985, loans and grants have been given each year to aid Local Education Agencies (LEAs) for conducting asbestos abatement projects under the Asbestos School Hazard Abatement Act (ASHAA).

AHERA

In 1986, the Asbestos Hazard Emergency Response Act (AHERA; Asbestos Containing Materials in Schools, 40 CFR Part 763, Subpart E) was signed into law as Title II of TSCA. AHERA was more inclusive than the May 1982 Asbestos-in-Schools Rule. AHERA requires LEAs to inspect their schools for asbestos containing building materials (ACBM) and prepare management plans which recommend the best way to reduce the asbestos hazard. Options include repairing damaged ACM, spraying it with sealants, enclosing it, removing it, or keeping it in good condition so that it does not release fibers.

The plans must be developed by accredited management planners and approved by the State. LEAs must notify parent, teacher and employer organizations of the plans, and then the plans must be implemented. AHERA also requires accreditation of abatement designers, contractor supervisors and workers, building inspectors, and school management plan writers. Those responsible for enforcing AHERA have concentrated on educating LEAs, in an effort to ensure that they comply with the regulations. Contractors that improperly remove asbestos from schools can be liable under both AHERA and NESHAP. For more information on AHERA, request the pamphlet entitled *"The ABC's of Asbestos in Schools"* from the EPA Public Information Center.

Asbestos Ban and Phase-out Rule

In 1989 EPA published the Asbestos: Manufacture, Importation, Processing, and Distribution in Commerce Prohibitions; Final Rule (40 CFR Part 763, Subpart I). The rule was intended to eventually ban about 94 percent of the asbestos used in the U.S. (based on 1985 estimates). Asbestos containing drum brake linings and roof coatings, for example, were banned. The rule was implemented in three stages between 1990 and 1997.

NESHAP

The Clean Air Act (CAA) of 1970 required EPA to develop and enforce regulations to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance with Section 112 of the CAA, EPA established National Emission Standards for Hazardous Air Pollutants (NESHAP). Asbestos was one of the first hazardous air pollutants regulated under Section 112. On March 31, 1971, EPA identified asbestos as a hazardous pollutant, and on April 6, 1973, EPA promulgated the Asbestos NESHAP in 40 CFR Part 61, Subpart M. The Asbestos NESHAP has been amended several times, most recently in November 1990.

What are the basic requirements of the Asbestos NESHAP?

The Asbestos NESHAP was intended to minimize the release of asbestos fibers during activities involving the handling of asbestos. Accordingly, it specifies work practices to be followed during renovations of buildings which contain a certain threshold amount of friable asbestos, and during demolitions of all structures, installations, and facilities (except apartment buildings that have no more than four dwelling units). Most often, the Asbestos NESHAP requires action to be taken by the person who owns, leases, operates, controls, or supervises the facility being demolished or renovated (the "owner"), and by the person who owns, leases, operators, controls or supervises the demolition or renovation (the "operator").

The regulations require owners and operators subject to the Asbestos NESHAP to notify delegated State and local agencies and/or their EPA Regional Offices before demolition or renovation activity begins. The regulations restrict the use of spray asbestos, and prohibit the use of wet applied and molded insulation (i.e., pipe lagging). The Asbestos NESHAP also regulates asbestos waste handling and disposal.

Why was the Asbestos NESHAP recently amended?

The Asbestos NESHAP was amended for several reasons. EPA wanted to clarify existing regulatory policies, and to add regulations which explicitly address monitoring and record keeping at facilities which mill, manufacture, and fabricate asbestos. Also, because of the high risk associated with the transfer and disposal of ACM, EPA also wanted to strengthen the requirements which govern asbestos waste disposal by requiring tracking and record keeping.

Furthermore, EPA determined that the Asbestos NESHAP needed to take into account the availability of improved emission controls. EPA also wanted to make the NESHAP consistent with other EPA statutes that regulate asbestos.

What sources are now covered by the asbestos NESHAP?

The following activities and facilities are currently regulated by the Asbestos NESHAP:

- The milling of asbestos.
- Roadways containing ACM.
- The commercial manufacture of products that contain commercial asbestos.
- The demolition of all facilities.
- The renovation of facilities that contain friable ACM.
- The spraying of ACM.
- The processing (fabricating) of any manufactured products that contain asbestos.
- The use of insulating materials that contain commercial asbestos.
- The disposal of asbestos-containing waste generated during milling, manufacturing, demolition, renovation, spraying, and fabricating operation.
- The closure and maintenance of inactive waste disposal sites.
- The operation of and reporting on facilities that convert asbestos containing waste material into non-asbestos material.
- The design and operation of air cleaning devices.
- The reporting of information pertaining to process control equipment, filter devices, asbestos generating processes, etc.
- Active waste disposal sites.

What were the major changes to the Asbestos NESHAP?

Milling, Manufacturing, and Fabricating Sources

Businesses which are involved in asbestos milling, manufacturing, and fabricating now must monitor for visible emissions for at least 15 seconds at least once a day (during daylight hours), and inspect air cleaning devices at least once a week. The facilities must maintain records of the results, and submit each quarter a copy of the visible emissions monitoring records if visible emissions occurred during the quarter. Facilities that install fabric filters (to control asbestos emissions) after the effective date of the revision must provide for easy inspection of the bags.

Demolition and Renovation

All facilities which are "demolished" are subject to the Asbestos NESHAP. The definition of demolition was expanded to include the intentional burning of a facility, in addition to the "wrecking or taking out of any load-supporting structural member of a facility." Owners and operators of all facilities which are to be demolished, and of facilities that contain a certain amount of asbestos which are to be renovated, must now provide more detailed information in notifications, including the name of the asbestos waste transporter and the name of the waste disposal site where the ACM will be deposited.

Owners and operators must give a 10-day notice for planned renovations and demolitions. They must renotify EPA in advance of the actual start date if the demolition or renovation will begin on a date other than the one specified in the original notification. Telephone re-notifications are permitted, but must be followed by written notice.



Starting one year after promulgation of the regulation, a person trained in the provisions of the Asbestos NESHAP, and in the methods of complying with them, must supervise operations in which ACM is stripped, removed or otherwise handled. This supervisor is responsible for all on-site activity. Before wetting is suspended, the EPA administrator must approve. When wetting of asbestos during its removal is suspended due to freezing temperatures, owners or operators must measure the air temperature in the work area three times during the workday, and must keep those records for at least two years.

The revisions also clarify EPA's position regarding the handling and treatment of non-friable asbestos material. The owner and operator must inspect the site for the presence of non-friable ACM, and include in the notification an estimate of how much non-friable ACM is present. Also, the owner and operator must describe the procedures to be followed if unexpected ACM is found in the course of demolition or renovation, and if non-friable asbestos becomes friable in the course of renovation or demolition.

Waste Transport and Disposal

Vehicles used to transport ACM must be marked according to new guidelines during loading and unloading. Labels indicating the name of the waste generator and the location where the waste was generated must be placed on containers of ACM. When ACM waste is transported off-site, a waste shipment record (WSR) must be given to the waste site operator or owner at the time that the waste is delivered to the waste disposal site. The owner or operator must send a signed copy of the WSR back to the waste generator within 30 days, and attempt to reconcile any discrepancy between the quantity of waste given on the WSR and the actual amount of waste received. If, within 15 days of receiving the waste, the waste site owner or operator cannot reconcile the discrepancy, he or she must report that problem to the same agency that was notified about the demolition or renovation.

New disposal sites must apply for approval to construct, and must notify EPA of the startup date. Existing disposal sites must supply EPA with certain information concerning their operations, such as the name and address of the owner or operator, the location of the site, the average weight per month of the hazardous materials being processed, and a description of the existing emission control equipment.

If a copy of the WSR signed by the waste site owner or operator is not received by the waste generator within 35 days of the date that the waste was accepted by the initial transporter, the waste generator must contact the transporter and/or disposal site owner or operator to determine the status of the waste shipment. If a signed copy of the WSR is not received within 45 days of the date that the waste was accepted by the initial transporter, the waste generator must submit a written report to the same agency that was notified about the demolition or renovation.

Owners of disposal sites must record on the deed to the disposal site that the property has been used for ACM disposal. They must also keep records that show the location, depth, area and volume of the asbestos waste; they must indicate on the deed that these records are available. Owners of inactive disposal sites must obtain written approval before they excavate or otherwise disturb ACM waste that has been deposited on the site.
